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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/542,783 | 07/20/2005 | Yutaka Saito | L9289.05165 | 9329 |
| 52989 | 7590 | 10/12/2006 | EXAMINER | |
| STEVENS, DAVIS, MILLER & MOSHER, LLP 1615 L. STREET N.W. SUITE 850 WASHINGTON, DC 20036 | | | MANCUSO, HUEDUNG XUAN CAO | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2821 | |

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/542,783

Applicant(s)

SAITO ET AL.

Examiner

Huedung Cao Mancuso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☐ Claim(s) 1-5, 10-11 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/20/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/10/06, 7/20/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, and 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1 the term "may" renders the claim indefinite because it is unclear whether the limitations following the term are drawing a diamond shape or not.

Claims 2-4, and 10-11 are rejected for depending on claim 1.

Claim 5 recites the limitation "the reflector" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Saito (US 6,573,874 B1).

The applied reference has a common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 5, Saito (figure 11) teaches an antenna device, comprising: two linear elements (50, and 51) having the same length, a bending part formed by bending the two linear elements at the centers of the elements with a length within a given range see Saito, figure 11, a feeding section 3 connected to one end of the two linear elements to feed power; the reflector (49) placed at a given distance in parallel to a plane containing the two linear elements see Saito, column 16, lines 3-5, wherein the two linear elements are bent and placed so that they draw a diamond shape see Saito, figure 11, of which one side has a length equivalent to a half wavelength of an operating frequency and the other ends of the two linear elements are open see Saito, column 9, lines 36-50 .

Allowable Subject Matter

6. Claims 1-4, and 10-11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to specifically teach that, a first delay section connected to the other end of the first linear element and one end of a third linear element for delaying the phase of an antenna current by a given phase, a second delay section connected to the other end of the second linear element and one end of a fourth linear element for delaying the phase of an antenna current by the same phase as that of the first delay section, and a reflector placed at a given distance in parallel to a plane, on which the linear elements have been placed.

7. Claims 6-9 are allowed.

8. The following is an examiner's statement of reasons for allowance:

The prior art made of record fails to anticipate or make obvious the claimed invention. Specifically, the prior art fails to teach, in combination with the remaining elements as recited in claim 6.

The present invention is directed to a method for generating a shaped reflector.

Regarding claim 6, Prior art fails to specifically teach that, the first delay section and the second delay section, which have been placed at each of opposite apex pairs of the diamond shape to delay the phase of an antenna current, the feeding section, which have been placed on either of another one of the opposite apex pairs of the diamond shape, for feeding power to the slot elements, a termination part formed at the other of another one of the opposite apex pairs of the diamond shape, for terminating the slot

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elements, and the reflector placed beyond the substrate at a given distance from and in parallel to the conductor layer.

Claims 7-9 are allowed for depending on claim 6.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura et al. (US 6,163,306) disclose a circularly polarized cross dipole antenna.

Egashira (US 2003/0043084 A1) discloses a slotted bow tie antenna with parasitic element, and a slotted bow tie array antenna with parasitic element.

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Inquiries

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Mancuso whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Mancuso
Patent Examiner

